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Memorandum

To: **LaDonna Turner, Site Assessment Manager**
Technical and Enforcement Branch
U.S. Environmental Protection Agency, Region 6

From: **Dana Bahar, Manager, Superfund Oversight Section**
Ground Water Quality Bureau, New Mexico Environment Department.

Date: **September 10, 2009**

Subject: **Pre-CERCLIS Screening Assessment of Flat Top Mine, McKinley County, New Mexico: Further action under CERCLA recommended**

Site name Flat Top Mine **Street address:** Not applicable
City not applicable **State** New Mexico **Zip code** not applicable
County McKinley
Latitude 35° 19' 20.11" **Longitude** 107° 49' 25.33"

Site physical description: The Flat Top Mine currently comprises scattered waste material piles and debris. Some of these waste piles are located near drainages, and show evidence of erosion. Some areas of apparent subsidence were noted during site reconnaissance

Site identification: Potential alluvial ground water contamination within the Grants Mineral Belt was identified because background standards established for the contaminants of concern for ongoing remedial action associated with the Homestake Mining Company NPL site (CERCLIS NMD0007860935) are generally higher than Maximum Contaminant Levels (MCLs). NMED conducted sampling of private residential wells in subdivisions located in the vicinity of the HMC site, and found that the majority had one or more contaminant concentrations exceeding MCLs.

Site summary: Observations made during NMED's Site reconnaissance are shown on the accompanying figures. The highest radioactivity was measured from mineralized limestone on the ground surface (1065 counts per second (cps). Elevated radioactivity also was noted at the reclaimed shaft location (553 cps; background=34 cps).

Targets: Residences are located near the junction of State Hwy. 605 and 509, approximately 1.73 air-miles east-northeast of the Site. Other potential targets may include cattle and wildlife.

Closest wells sampled to date: livestock well SMC-33 (0.38 air-miles; 164 µg/l total uranium in 2009 sampling); livestock well SMC-22 (0.22 air-miles; 48.2 µg/l total uranium in 2009).

Site ownership and Potentially Responsible Parties: Surface and mineral rights reportedly are held by the Bureau of Land Management (BLM). Bailey and Fife reportedly last operated the mine in 1966.

File review: NMED staff reviewed the following files:

- Database compiled by Mining and Minerals Division of the New Mexico Energy, Minerals, and Natural Resources Department (07/20/2007).
- Anderson, Orin J., 1980. "Abandoned or inactive uranium mines in New Mexico".
- McLemore, Virginia T. and William L. Chenoweth, 1991. "Uranium mines and deposits in the Grants district, Cibola and McKinley Counties, New Mexico." New Mexico Bureau of Mines and Mineral Resources Open-file report 353.
- Rappaport, Linda, "Uranium deposits of the Poison Canyon ore trend, Grants District," in "Geology and technology of the Grants Uranium Region, 1963. State Bureau of Mines and Mineral Resources.
- U.S. Geological Survey, 1997. "Gallup quadrangle NURE HSSR study." OFR-97-492.

Site reconnaissance: NMED staff conducted a Site reconnaissance on July 2, 2009.

Recommendation: A release of CERCLA hazardous substances has been documented at the site. NMED recommends further investigation under CERCLA to assess the risk posed by the site using the Hazard Ranking System.

NMED recommends that the investigation include the following:

1. Sample sediments along drainages to characterize extent of Site-derived waste dispersion.
2. Investigate and characterize ground water impacts.

In addition NMED recommends the following actions be performed to address immediate threats to public health and the environment:

1. Remove waste with elevated radioactivity.

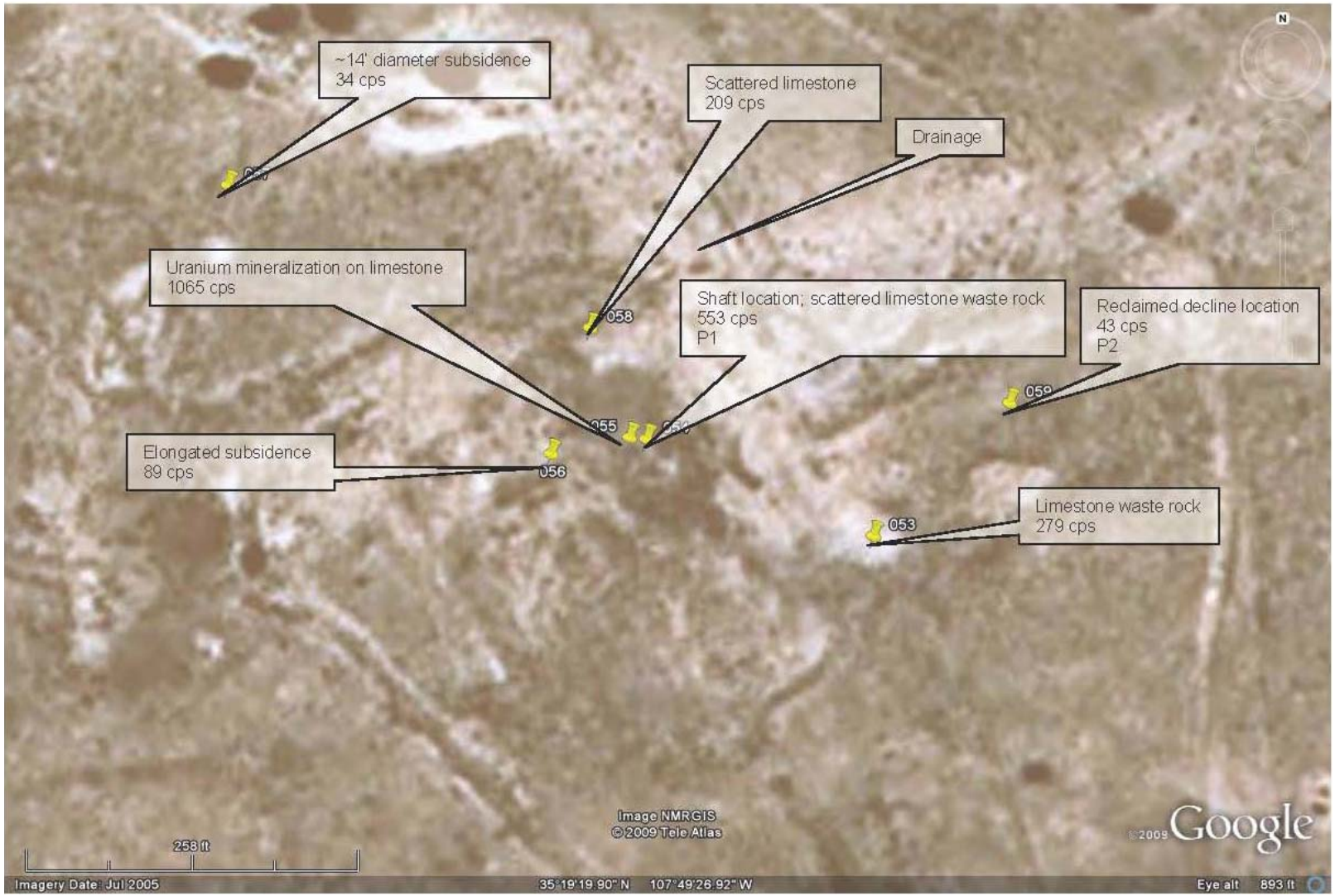

Figure 1: Flat Top Mine—measurements taken on July 2, 2009

"Px" reference the location of photographs on pages following.

P1: Flat Top Mine shaft location; scattered limestone waste rock

P2: Flat Top Mine reclaimed decline location